

Eimac 2-150D directly heated high-vacuum rectifier for demanding high-voltage supplies. Its heavy filament, tens-of-kilovolts inverse-voltage capability, and high current suit transmitter and industrial systems.

GENERAL CHARACTERISTICS

BASE DESIGNATION	–	BASE PINS	4
NOMINAL HEATER	5 V / 13 A	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
MAXIMUM PLATE DISSIPATION	90 W
PEAK INVERSE VOLTAGE	30000 V
NOMINAL OUTPUT CURRENT	250 mA
PEAK FORWARD CURRENT	3 A
Published per-tube maximum ratings promoted from the source.	

The Eimac 2-150D is a high-vacuum rectifier for high-voltage power supplies, rated for approximately 150 mA average plate current and 30 kV peak inverse voltage.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Eimac Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1950 EIMAC TUBES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average plate current	150 mA	Maximum average plate current from Eimac high-vacuum rectifier table.
Plate dissipation	90 W	Maximum plate dissipation from Eimac high-vacuum rectifier table.
Peak inverse voltage	30000 V	Maximum peak inverse voltage from Eimac high-vacuum rectifier table.
Filament voltage	5 V	Nominal filament voltage from Eimac high-vacuum rectifier table.
Filament current	13 A	Nominal filament current from Eimac high-vacuum rectifier table.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 Eimac

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 EIMAC

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	300 ohm	—
Filament Voltage Range	4.75–5.25 V	For maximum tube life



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Eimac Tube Manual

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1965 EIMAC TUBE MANUAL

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The [1]	2 mA	The 2-150D has a maximum d-c current rating of 250 milliamperes
The [2]	-150 mA	The 2-150D has a maximum d-c current rating of 250 milliamperes
The [3]	250 mA	The 2-150D has a maximum d-c current rating of 250 milliamperes
and a maximum peak inverse voltage rating of	30000 V	and a maximum peak inverse voltage rating of 30,000 volts. CooHng is by

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
capacitor-input filterwith [1]	10600 pF	capacitor-input filterwith 10,600 volts single-phase supply. Four 2-150D's in
capacitor-input filterwith [2]	2 pF	capacitor-input filterwith 10,600 volts single-phase supply. Four 2-150D's in
capacitor-input filterwith [3]	-150 pF	capacitor-input filterwith 10,600 volts single-phase supply. Four 2-150D's in
a bridge circuit will deliver [1]	500	a bridge circuit will deliver 500 milliamperes at 19,000 volts to a choke-input
a bridge circuit will deliver [2]	19000	a bridge circuit will deliver 500 milliamperes at 19,000 volts to a choke-input
Voltage	5 V	Voltage----- 5.0 volts
Current	13 A	Current----- 13.0 amperes
Maximum Temperature of plate seal	225	Maximum Temperature of plate seal ----- 225OC
Recommended Heat Dissipating plate connector - - - - - Eimac HR	6	Recommended Heat Dissipating plate connector - - - - - Eimac HR-6
PEAK INVERSE PLATE VOLTAGE	30000 V	PEAK INVERSE PLATE VOLTAGE - - 30,000 MAX. VOLTS
PLATE DISSIPATION	90 W	PLATE DISSIPATION ----- 90 MAX. WATTS
Johnson Co. No [1]	123 V	Johnson Co. No.123-211, a National Co. No. XM-50, or voltage at low current. Under these conditions capaci-
Johnson Co. No [2]	-211 V	Johnson Co. No.123-211, a National Co. No. XM-50, or voltage at low current. Under these conditions capaci-
Johnson Co. No [3]	50 V	Johnson Co. No.123-211, a National Co. No. XM-50, or voltage at low current. Under these conditions capaci-
fhnos:q:f`vti]:nvto];:::ekultnfp]sf:Ee±ncu±:tcruafttesa]PnarifeT] £,r]±¥ mum d-c current rating of the [1]	2 A	fhnos:q:f`vti]:nvto];:::ekultnfp]sf:Ee±ncu±:tcruafttesa]PnarifeT] £,r]±¥ mum d-c current rating of the 2-150D when no input
fhnos:q:f`vti]:nvto];:::ekultnfp]sf:Ee±ncu±:tcruafttesa]PnarifeT] £,r]±¥ mum d-c current rating of the [2]	-150 A	fhnos:q:f`vti]:nvto];:::ekultnfp]sf:Ee±ncu±:tcruafttesa]PnarifeT] £,r]±¥ mum d-c current rating of the 2-150D when no input
The maximum temperature at the plate seal must theE£fs±:Eel: ftde:_:FtE::,d±.ftvhoe]tcaagse;o¥g:i:atghefsm]	1	The maximum temperature at the plate seal must theE£fs±:Eel: ftde:_:FtE::,d±.ftvhoe]tcaagse;o¥g:i:atghefsm]:1:Espufeur¥
tion, [1]	132 A	tion,132 W. 22nd Street, New York 11, N.Y. current only in the case of the simple half-wave recti-
tion, [2]	22 A	tion,132 W. 22nd Street, New York 11, N.Y. current only in the case of the simple half-wave recti-
tion, [3]	11 A	tion,132 W. 22nd Street, New York 11, N.Y. current only in the case of the simple half-wave recti-
the rated value of	5	the rated value of 5.0 volts. Variations must be kept minimum value of charging-circuit resistance is neces-
The thoriated-tungsten filament of the [1]	2 V	The thoriated-tungsten filament of the 2-150D reach- resistance of the a-c voltage supply, R].
The thoriated-tungsten filament of the [2]	-150 V	The thoriated-tungsten filament of the 2-150D reach- resistance of the a-c voltage supply, R].
application of voltage. Plate voltage may be applied Rp is the plate resistance of the [1]	2 V	application of voltage. Plate voltage may be applied Rp is the plate resistance of the 2-150D, which may
application of voltage. Plate voltage may be applied Rp is the plate resistance of the [2]	-150 V	application of voltage. Plate voltage may be applied Rp is the plate resistance of the 2-150D, which may
simultaneously with filament voltage. be taken as	300 V	simultaneously with filament voltage. be taken as 300 ohms.
plate dissipation rating of	90 W	plate dissipation rating of 90 watts is approached. The
maximum peak inverse voltage rating of	30000 V	maximum peak inverse voltage rating of 30,000 volts
when used as a power-supply rectifier. circuits of Fig	2 W	when used as a power-supply rectifier. circuits of Fig. 2. This resistor must be inserted in such
Siam,f[#vhease, [1]	10	Siam,f[#vhease, 10 , 600 11,800 200 in the circuits of Fig. 2, the plate resistance (Rp) will
Siam,f[#vhease, [2]	600	Siam,f[#vhease, 10 , 600 11,800 200 in the circuits of Fig. 2, the plate resistance (Rp) will

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Siam,f[#vhease, [3]	11800	Siam,f[#vhease, 10 , 600 11,800 200 in the circuits of Fig. 2, the plate resistance (Rp) will
Siam,f[#vhease, [4]	200	Siam,f[#vhease, 10 , 600 11,800 200 in the circuits of Fig. 2, the plate resistance (Rp) will
Siam,f[#vhease, [5]	2	Siam,f[#vhease, 10 , 600 11,800 200 in the circuits of Fig. 2, the plate resistance (Rp) will
Mci#i7 [1]	7 W	Mci#i77i"7ri D-C C'ttr7.e7tt RC[tj7.gs - Plate dissipation
Mci#i7 [2]	7 W	Mci#i77i"7ri D-C C'ttr7.e7tt RC[tj7.gs - Plate dissipation
rather than peak current usually limits the d-c current ::ptphi;::::i°fiprf:ir3c°u']% [1]	8 A	rather than peak current usually limits the d-c current ::ptphi;::::i°fiprf:ir3c°u']%8°thve°] f:..a nins;:rgs]:-3:iatsaegep:g'ebre-
rather than peak current usually limits the d-c current ::ptphi;::::i°fiprf:ir3c°u']% [2]	-3 A	rather than peak current usually limits the d-c current ::ptphi;::::i°fiprf:ir3c°u']%8°thve°] f:..a nins;:rgs]:-3:iatsaegep:g'ebre-
which the [1]	2 V	which the 2-150D is capable of delivering to the load. used in design is the peak a-c supply voltage (1.41
which the [2]	-150 V	which the 2-150D is capable of delivering to the load. used in design is the peak a-c supply voltage (1.41
which the [3]	1.41 V	which the 2-150D is capable of delivering to the load. used in design is the peak a-c supply voltage (1.41
Because the plate dissipation associated with a given times E,m in Fig	2 W	Because the plate dissipation associated with a given times E,m in Fig. 2) in the case of bridge circuits, and
larger) of input inductance (L in Fig	1	larger) of input inductance (L in Fig.1) : large enough to hold the ripple to a low value. In spe-
Lo=E;;; for full-wave single-phase rectifiers, able, and filter capacitance is low, the [1]	2 pF	Lo=E;;; for full-wave single-phase rectifiers, able, and filter capacitance is low, the 2-150D is caLp-
Lo=E;;; for full-wave single-phase rectifiers, able, and filter capacitance is low, the [2]	-150 pF	Lo=E;;; for full-wave single-phase rectifiers, able, and filter capacitance is low, the 2-150D is caLp-
Lo-fa for full-wave three-phase rectifiers, moderate, the maximum current rating of the [1]	2 mA	Lo-fa for full-wave three-phase rectifiers, moderate, the maximum current rating of the 2-150D
Lo-fa for full-wave three-phase rectifiers, moderate, the maximum current rating of the [2]	-150 mA	Lo-fa for full-wave three-phase rectifiers, moderate, the maximum current rating of the 2-150D
where : Lo ="critical" value of input inductance Qienries), The plate characteristic curve for the [1]	2	where : Lo ="critical" value of input inductance Qienries), The plate characteristic curve for the 2-150D serves
where : Lo ="critical" value of input inductance Qienries), The plate characteristic curve for the [2]	-150	where : Lo ="critical" value of input inductance Qienries), The plate characteristic curve for the 2-150D serves
Load current (amps) peak plate current of	3 A	Load current (amps) peak plate current of 3.0 amperes must not be exceeded.
Eimac [1]	2 mA	Eimac 2-150D Maximum D-C Current Ra+ings for R-C Fil+er Applica+ions
Eimac [2]	-150 mA	Eimac 2-150D Maximum D-C Current Ra+ings for R-C Fil+er Applica+ions
A-C Supply Voltage(E.ms) [1]	0.78 V	A-C Supply Voltage(E.ms) 0.78 0.82 0.90 1.07 1.50
A-C Supply Voltage(E.ms) [2]	0.82 V	A-C Supply Voltage(E.ms) 0.78 0.82 0.90 1.07 1.50
A-C Supply Voltage(E.ms) [3]	0.9 V	A-C Supply Voltage(E.ms) 0.78 0.82 0.90 1.07 1.50
A-C Supply Voltage(E.ms) [4]	7 V	A-C Supply Voltage(E.ms) 0.78 0.82 0.90 1.07 1.50
A-C Supply Voltage(E.ms) [5]	50 V	A-C Supply Voltage(E.ms) 0.78 0.82 0.90 1.07 1.50
Peak Inverse Voltage(I/	2 V	Peak Inverse Voltage(I/2+hosevaluesfor circui+ b.I

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